

## ABSTRACT

A microwave breast cancer imaging method that includes an examination table that is both comfortable and reliable is provided that includes a support system and an orientation system such that breasts can remain in a fixed position to allow for scanning. A horizontal microwave and optically transparent scan plate forms part of the top of the examination table. The imprint of the breasts on the scan plate may be visually displayed to aid in the orienting of each breast such that all volumes within the breast are scanned. Microwave power is then scanned upward through the scan plate to develop a microwave response that is indicative of the presence of a lesion. After scanning, the visual imprint of the breast is recorded. As needed, microwave equipment can be included within a microwave shielded enclosure that also forms part of the scan table. Spurious leakage of microwave power may be further suppressed by use of microwave-absorbing materials, within the enclosure and, in the padding that covers the surface of the examination table and removable pads.